

Running Head: RECAPTURE IN-PT. OB SERVICES



A Business Case Analysis on the Feasibility of Recapturing In-patient Obstetrical Services for Naval Hospital Beaufort

A Graduate Management Project Proposal

Submitted to the Program Director in Candidacy for the Degree of
Master of Health Care Administration

By

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Disclaimer

The views and ideas expressed throughout this project are those of the author and in no way reflects the official policy or position of Baylor University, Naval Hospital Beaufort, the Department of the Navy, the Department of the Army, the Department of Defense, or the United States Government.

Statement of Ethical Conduct in Research

The author of this project declares no conflicts of interest or financial interests in any product or service that may or may not be mentioned in this paper, including grants, employment, stock holdings, gifts, or honoraria. The confidentiality of individual members of the study population was protected at all times throughout the study.

Abstract

The purpose of this Business Case Analysis is to collect and examine data in order to determine whether or not to install Labor, Delivery, Recovery, and Post-Partum (LDRP) suites in the hospital planned for construction in 2011. This paper briefly discusses the local hospital and its impact on surrounding health care facilities, to include Naval Hospital Beaufort. The National Defense Authorization Act for fiscal year 2002 will be examined along with its impact on TRICARE Obstetrical in-patient beneficiaries and their available choices. The author will examine the opportunities to recapture this very important group. The final analysis indicates the need to abandon the plans for LDRP suites and to remain with the status quo, the current External Resource-Sharing Agreement.

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A Business Case Analysis on the Feasibility of Recapturing In-patient Obstetrical Services for Naval Hospital Beaufort

Purpose

The purpose of this Business Case Analysis is to assess the financial feasibility of recapturing in-patient obstetrical services that are currently provided by Beaufort Memorial Hospital (BMH) under an existing External Resource-Sharing Agreement (ERSA). This analysis will be performed through the examination of costs and project practicality. This will be achieved by examining the costs associated with set-up and overall implementation of an in-house In-patient Obstetrical Department. The primary areas of interest are: structural facility modification costs, workload data--demand and requirements, personnel salaries and benefits, and equipment and supplies.

Introduction

Naval Hospital Beaufort

Naval Hospital Beaufort (NHB) was built in 1949. As the parent Military Treatment Facility (MTF), it services and treats the eligible population surrounding Beaufort County, Beaufort, SC. Naval Hospital Beaufort is fully accredited by the Joint Commission on Accreditation of Healthcare Organizations. The hospital provides numerous services, such as Emergency Services, Primary Care, General Surgery, Orthopedics, Internal Medicine,

Physical Therapy, Radiology, Pharmacy, Laboratory, and some in-patient care services, to the eligible beneficiaries in its catchment area. Naval Hospital Beaufort's catchment area, a 40 mile radius from the actual MTF, overlaps the catchment areas of numerous MTFs - to include: Naval Hospital Charleston, 437th Medical Group Charleston, Tuttle Army Health Clinic, and Combined Health Clinic, Fort Stewart.

NHB supports two local bases, both of which are within 13 miles. The closest base is the Marine Corps Recruit Depot (MCRD) Parris Island. MCRD Parris Island is one of two Marine Corps boot camp facilities; the other is located in San Diego, CA. A branch health clinic is located on MCRD Parris Island to assist in minimizing the amount of time a recruit must spend out of and away from the training environment. The clinic is set-up and equipped with specific clinics and specialties that render themselves particularly beneficial for injuries associated with rigorous exercise and young personnel. The other clinic, which is located on the Marine Corps Air Station, provides a quick and fluid mechanism for treatment, while reducing non-productive work hours, for the operational forces. Additionally, the clinic provides a foundation of familiarity with the medical staff that will be diagnosing and treating them should the necessity arise during a deployment.

The Beneficiaries

NHB's total population served includes active duty military, family members of active duty military, retirees, family members of retirees, government employees, and contract workers. The total population eligible for care at NHB is approximately 32,000.

Table 1.

Eligible Population for NH Beaufort - 2005 (Actual) and 2006 - 2009 (Projected).

	PRISM Area ID	2005	2006	2007	2008	2009
Catchment Area of 0104	0104	17,410	17,219	17,471	17,099	16,968
	0272	2,515	2,525	2,547	2,507	2,502
	0358	10,897	11,112	11,109	10,274	10,222
	0911	112	119	101	112	100
	0941	1,262	1,204	1,200	1,169	1,211
Total		32,196	32,179	32,428	31,161	31,003

Note. Prism Area ID 0358 contains the female recruit population numbers. From TRICARE Defense Enrollment Eligibility Reporting System (DEERS) information, (2005c).

NHB's eligible population does include the 5,000 female recruits that pass through MCRD Parris Island annually; but for this study, the female recruits are not an area of consideration, given that they are not permitted to engage in any activities that could result in pregnancy. The total number of

beneficiaries enrolled to NHB is approximately 12,000 as presented by the Tri-Service Business Planning Tool in Table 2 on page 11.

Table 2.

Enrolled Population for NH Beaufort - 2005 (Actual) and 2006 - 2009 (Projected).

	2005	2006	2007	2008	2009
⊕ AD	2,810	2,405	2,405	2,405	2,405
⊕ ADFM	6,968	6,830	6,830	6,830	6,830
⊕ OTHERS	2,875	2,956	2,956	2,956	2,956
Total	12,653	12,191	12,191	12,191	12,191

Note. From TRICARE Defense Enrollment Eligibility Reporting System (DEERS) information, (2005c).

The disparate difference in number between the eligible and the enrolled population is the result of two separate factors. The first factor stems from the aforementioned catchment area overlap with other MTFs. Even though portions of this population are enrolled to other MTFs; they technically can walk through NHB's doors at any time, depending on the need (i.e. emergency) or availability of services at their enrolled MTF. The Marine recruits are the other factor that grossly affects the difference between the number of personnel eligible for care and the number of personnel enrolled to NHB.

Approximately 25,000 recruits are processed through MCRD Parris Island each year. As recruits, they are not eligible to enroll in TRICARE until they have successfully completed boot camp. Although, NHB is the primary health care facility for these recruits, it cannot claim these individuals as enrolled members to the MTF.

Unbeknownst to some, the subdivision of NHB's recruit population may start to pose financial problems for NHB when full and complete implementation of the prospective payment system (PPS) is realized. By the beginning of fiscal year 2008, PPS will look at an MTF's population and provide funding based on productivity and the characteristics of the MTF's population (e.g. enrolled to your MTF, enrolled to another MTF, and non-enrolled but eligible for care). Under these rules, the command will not receive appropriate budget funding for the recruit population, even though the command provides/manages all of the care received by the recruit population.

Conditions Which Prompted the Study

In 2000, the Bureau of Medicine and Surgery (BUMED) tasked NHB to recapture 75% of its network admissions in order to reduce network expenses. Network admissions are those personnel admitted to a civilian facility that agree to see TRICARE beneficiaries for specific care needs. The only practical vehicle available to comply with BUMED's directive is to

recapture in-patient obstetrical services that are presently provided through the ERSA. According to TRICARE (2004), ERSAs are "arrangements that allow military providers to render medical services to TRICARE beneficiaries in civilian network medical facilities" (p. 1). Obstetrical in-patient care is the single greatest portion of the command's network admissions. This agreement is utilized so that network facilities will be able to provide those much-needed services, to MTF beneficiaries, which the MTF cannot. Presently, NHB monitors and controls all non-obstetrical network admissions by utilizing the 'Right of First Refusal' (NHB, 2003). 'Right of First Refusal' affords the MTF the opportunity to provide the care first. If that service is not available or accessible, within the designated guidelines, then the beneficiary is to be referred/deferred to a TRICARE network provider (Humana Military Health Care Services Inc., 2005). A patient is being 'referred' when they are being sent to another department or facility to receive some form of medical treatment that the initial department/facility does not provide. A 'deferral' occurs when a patient is sent to another facility due to the fact that the initial treatment facility provides the service but access to the service is not available in a timely manner.

The increased importance of providing quality care with lesser resources, such as personnel and monies, is driving NHB

to examine alternative methods of providing this care at a lower cost. Once again, recapturing in-patient obstetrical care seems to be the major avenue for such an accomplishment. A Business Case Analysis must be performed to ensure that this decision is practical, feasible, and financially beneficial.

Problem Statement and Question

The Department of Defense is facing an era of limited resources and increased accountability for costs. These items have trickled down to every MTF, to include NHB. The increased costs for in-patient obstetrical services are requiring more and more TRICARE expenditure dollars and are an area that warrants focused attention. Thus, NHB is being asked to justify its continued use of an external facility, as opposed to military assets, with the purpose of providing this care. As stewards of the taxpayers' dollars, every attempt to limit these costs, while providing high quality care, should be made. This BCA will examine and analyze the aforementioned problems surrounding Naval Hospital Beaufort and its means for providing in-patient obstetrical care. This Graduate Management Project will answer the question: Is it beneficial for NHB to recapture its in-patient obstetrical services presently being provided under an ERSA?

Background

BMH - Sole Community Hospital

Presently, all in-patient obstetrical care is being deferred to the network and Beaufort Memorial Hospital (BMH) is the primary recipient. BMH is a local, not-for-profit, Sole Community Hospital (SCH). A SCH is classified as such by the Centers for Medicare and Medicaid Services (CMS), if it is located 35 miles from similar hospitals or if it is located in a rural area between 25 and 35 or more miles from other similar hospitals (CMS, 2004). Additionally, a SCH must meet one of five other requirements. These five requirements, summarized, involve accessibility or the lack thereof and the weather/time components that may affect timely accessibility (CMS). As a SCH, in which local competition is non-existent, BMH is not required to bill according to Diagnosis Related Group (DRG) rates. This alone puts NHB in a very unique situation when looking at bargaining ability and leveraging power.

External Resource-Sharing Agreement

There are three main issues driving the decision to analyze the practicality and feasibility of recapturing NHB's obstetrical in-patient services: External Resource-Sharing Agreement, the National Defense Authorization Act of Fiscal Year 2002, and the construction plans for a new Hospital. The MTF provides all outpatient obstetrical services, to include pre-

natal care. In 1998, an External Resource-Sharing Agreement (ERSA) was negotiated and agreed upon with BMH. This agreement only covers non-complicated in-patient obstetrical care and authorizes military physicians to perform deliveries and in-patient care for both mothers and newborns. One difficulty with this arrangement is that NHB physicians must travel back and forth to BMH. The traveling our obstetricians, pediatricians, and family practice physicians are required to do in order to provide this care removes them from the Naval Hospital Beaufort clinic setting. This lost time decreases the clinic's overall ability to remain productive. All complicated obstetrical care is coordinated with and transported to facilities in other cities such as Columbia and Charleston, South Carolina and Savannah, Georgia. Additionally, these facilities are used as alternate locations when BMH does not have the bed availability to accept one of NHB's obstetrical cases.

National Defense Authorization Act of Fiscal Year 2002

Recapturing the obstetrical in-patient beneficiaries cannot be assumed or taken for granted. The National Defense Authorization Act (NDAA) of Fiscal Year (FY) 2002, permits TRICARE Standard and Extra beneficiaries to receive obstetrical care from any provider (civilian or military) without obtaining a Non-Availability statement (NAS) (Raezer, Cannon, Moakler, Bell, 2003). TRICARE Standard is the basic military health care

plan, which offers its members the opportunity to see any TRICARE-certified provider. This option accompanies greater out-of-pocket costs for the patient. The provider is allowed to charge up to 15% more than the TRICARE maximum allowable charge (TMAC). The patient pays for any amount over this TMAC rate (TRICARE, 2005a). TRICARE Extra is another type of plan offered through the TRICARE system. TRICARE Extra allows its members to seek care out in town as long as it is with a TRICARE participating provider. By law, the provider cannot charge more than the established TMAC rate; therefore, the patient incurs no out-of-pocket expense (TRICARE, 2005b). Presently, NHB's ERSA agreement does not charge its beneficiaries for this service. Without the ERSA, depending on the status of the patient (e.g. TRICARE: Prime, Extra, or Standard), the patient could be required to pay some portion of the bill for the services provided.

"The ramifications of this new opportunity for potential patients in the future are wide-ranging and highly significant for the entire Military Health System" (Shields, 2003). It is a reality that some beneficiaries will elect to continue to receive their care out in town, likely due to positive past experiences and/or for continuity of care. It is also realistic to envision that the new state-of-the-art Labor, Delivery, Recovery, and Post-Partum (LDRP) suites at NHB will attract

beneficiaries to partake in the utilization of this new and improved service.

New MTF Planned for Construction

NHB is scheduled to have a new facility built in the year 2011. This BCA is needed to explore and examine the feasibility of recapturing in-patient obstetrical services. If found to be necessary, this BCA will be used to show personnel at the Bureau of Medicine and Surgery (BUMED) and Navy Medicine East (NME) that the inclusion of LDRP suites in the master facility plan will be very beneficial to NHB's patients, physicians, the command, and the United States Navy. BUMED and NME are two authorities, which monitor and approve facility construction and modifications in our region. LDRP suites will allow NHB to competitively compete with civilian facilities for military beneficiaries instead of financing the increasing costs of the more expensive purchased civilian care.

Literature Review

There is no shortage of documentation concerning market competition and its influence on the costs of health care services. Abraham, Gaynor, & Vogt (2003) found that market entry and competition reduces variable profits while increasing quality. NHB is "located in a medically isolated community and lacks contracting opportunities that are available in larger, more medically competitive communities" (NHB, 2003). BMH is

profiting from a phenomenon of little-to-no competition, while steadily increasing the shareholders' profit margin. Sohn (2002) has researched and found that for-profit hospitals face a lot more competition than their not-for-profit counterparts. This is largely because for-profit hospitals tend to charge more for their services; thus, enticing competition to enter the local market (Woolhandler & Himmelstein, 2004). As a SCH, BMH finds itself shielded from the harsh realities of true market competition. Gift, Arnould, and Debrock (2002) also studied the impact of hospital competition on a facility and its fees for services. They found that increased competition, to a certain degree, decreased the costs for health care services. In order to remain competitive, healthcare organizations had to lower their costs or at least decrease the amount of percentage growth in costs annually. Accomplishing this task, while remaining financially profitable, requires the organization to increase efficiency. BMH lacks the competition that would incentivize them to lower costs to continuously gain new customers.

The Military Health System (MHS) is being asked to increase access and decrease deferrals for its patients while improving the quality of care provided. All of this is being asked in an era of decreasing resources (e.g. structural, personnel, and fiscal). The PPS that is being executed by the MHS is one of the purse-tightening tools that are in the early stages of full

implementation. The PPS system will provide funding for the MTFs according to beneficiaries and their enrollment status. This funding will also be coupled with productivity measures to ensure that ALL MTFs are either financially viable or serving a community benefit that would not otherwise be provided. Of course, as in any strategic vision there are exceptions to allow for unique situations, such as: overseas locations and areas that would become underserved if the MTF were to be closed.

Furthermore, the Defense Advisory Committee on Women in the Services (DACOWITS) is putting a greater emphasis on the healthcare services provided by the military to women in uniform. This committee is a proponent of bringing services such as obstetrics back into our facilities to ensure high quality care at a lower price (Gilmore, 2003b). By directly controlling the care provided to a beneficiary, the military can better control expenses and the quality of care being provided.

An estimated 40% of all military health care business involves obstetrical care; controlling these costs is a giant step in the right direction (Gilmore, 2003a). According to an Office of The Surgeon General Memo publicized by LTG Peake (July 2002), researchers found that women currently make about 75% of the health care decisions for their families. The initial usage of obstetrical services leads to follow-up gynecological appointments and pediatric use in that same facility, ultimately

becoming the primary institution for health care services for that family. According to Franczyk (1997), "...if women come to an institution to have their babies, they'll in turn bring their families there for care also." The inability to provide the in-patient obstetrical care, in-house, greatly affects the choices of our beneficiaries. With this knowledge, we can extrapolate that this population can be captured by assessing and providing services and amenities, which the targeted audience desires.

Tinson (2000) studied maternity patients to gain an understanding of what the consumer wants. The study found that hospitals and health care organizations need to provide the services and assistance that are expected by their consumers. The LDRP suites that NHB is considering to add to its new facility plan are one of those items that would increase patient satisfaction, as identified by Tinson (2000).

"Patients want to go to a place that's comfortable and attractive and preferably in their own community" (Franczyk, 1997). In today's environment, comfortable and attractive comes in the form of LDRP suites, not just Labor, Delivery, and Recovery (LDR) rooms, as is the case at Beaufort Memorial. The LDR rooms at BMH usually require the patients to move into another room after recovery. The recovery period lasts approximately one hour. During the delivery period, only one support person is allowed in the room. Of course, this is

subject to the physician's approval. Visitors are permitted during the post-partum period, but friends and siblings of the newborn are only permitted during a four-hour time span (4pm - 8pm) (Beaufort Memorial Hospital, 2006). LDRP suites remove these restrictions and allow its occupants to experience a more enjoyable celebration.

NHB wants to include LDRP suites in its new facility plans. These LDRP suites will allow for the achievement of certain patient satisfiers in which the LDR rooms at BMH do not. A few of the benefits of LDRP suites are: personal privacy throughout the hospital stay, 24-hour visitation rights, and overnight accommodations for the father or significant other. This type of environment facilitates a 'one-stop' shopping atmosphere that is designed around the needs of the patient and the physician (Pollos, 1998). Our beneficiaries want and deserve this type of service and level of care; Naval Hospital Beaufort wants to provide it.

Method and Procedures

Research Design

This project is a retrospective feasibility analysis. The key variables in this analysis are: ERSA cost, workload data, staffing costs, historical in-patient obstetrical service consumption, modification costs, and equipment costs (Appendix A). These variables are presented in Appendix B in more detail.

Historical data was retrieved from FY 2000 to FY 2005. These numbers were forecasted out to provide an estimate of costs in the year 2011.

Population of Interest

The population of interest for this study is the female beneficiaries, of childbearing age, who are currently enrolled to NHB that presently utilize the ERSa with BMH in order to receive their in-patient OB care. This population includes active duty personnel, their family members, retirees, and their eligible family members. Needless to say, the majority of the population is expected to consist of active duty family members.

Data Sources

The Military Health System Management Analysis and Reporting Tool (M2) database is the primary source for data acquisition. M2 is a data warehouse that can be used to retrieve and analyze summary and detailed population, clinical, and financial data from all Military Health System (MHS) Regions. The M2 data warehouse contains information from MTFs and commercial network facilities. The information provided by M2 facilitates the decision-making process for healthcare managers using the system. M2 allows its users to perform trend analyses, conduct patient and provider profiling studies, and conduct business case analyses which can assist in increasing decision-

making accuracy and the MTF's overall health plan efficiency (MHS Help Desk, 2005).

The M2 data warehouse receives its information from a compilation of systems. There are four main systems that feed data into M2. The Defense Enrollment and Eligibility Reporting System (DEERS) "is a computerized database of military sponsors, families and others worldwide who are entitled under the law to TRICARE benefits. DEERS registration is required for TRICARE eligibility" (TRICARE, 2005c, p.1). Active duty and retired personnel are automatically entered into DEERS, but the sponsor must initiate the process for the entry of their family members (2005c). The Armed Forces Health Longitudinal Technology Application (AHLTA), formerly known as the Composite Health Care System (CHCS) II, furnishes "healthcare providers access to data about beneficiaries' conditions, prescriptions, diagnostic tests and additional information essential to providing quality care" (Health Affairs, 2005, p.1). The Medical Expense and Performance Reporting System (MEPRS) "is the standard cost accounting system for the Military Health System (MHS), containing Tri-Service financial, personnel, and workload data from reporting medical and dental treatment facilities worldwide" (MEPRS, Info, 2005, p.1). Managed Care Support Contractors provide clinical, financial, and administrative data for services performed outside of the MTF. These four systems, feeding data into M2,

provide the greatest portion of the information needed when trying to perform a Business Case Analysis.

Data Collection

The data collected from M2 was historical data, primarily patient encounters, and their associated total costs. Since the hospital presently does not perform any in-house deliveries, those numbers were retrieved from the purchased care portion of the system. The historical data was collected from the Fiscal Years 2000 - 2005.

Data Analysis

The data retrieved from M2 for the years 2000 - 2005 displayed stagnant demand (no significant increase) for OB in-patient care for each year. This trend is expected to continue through the 2011 and the payback period.

The Venture Capital Initiative (VCI) tool was the tool of choice for conducting the final analyses. The VCI is a tool that can be used to justify bringing the in-patient OB service back in-house, using financial metrics. The TRICARE Governance Plan requires MTFs to optimize their delivery and financing schemes. The Venture Capital Program (VCP) guides the use of this tool. The VCP's core objectives are to:

- Achieve improvements in the operational efficiency of the MHS,
- Increase direct care market share,

- Evaluate VCIs through standard economic analysis techniques applied with reasonable/consistent assumptions, and
- Monitor VCIs to ensure resources are aligned to the most cost effective initiatives (Paul and Felicio, 2005, p. 5).

The VCI tool allows for the input of all necessary information, to include: inflation rates, utilities, equipment (itemized in Appendix A), travel costs, capital investment costs, staffing requirements (listed in Appendix B), and volume projections. The staffing requirements were already analyzed and spelled out in NHB (2003). The Innova Group (2005) conducted an analysis on NH Beaufort's obstetrical inpatient workload and projected the demand out until FY2011. They found that demand would remain steady at 500 deliveries annually. This rate is expected to continue due to the fact that there are no significant changes being made to alter the current projections. After inputting the necessary information, the VCI tool presents the requested data in a number of ways so that the correct decisions can be made. The criteria used to determine whether the project should be accepted or not are: Payback Period and Return on Investment (ROI). These two analyses are explained in the following section. It is important to remember that an analysis tool is only as good as the data that has been implanted. With that being said, the utmost consideration for attention to detail and accuracy must be applied.

Decision Criteria

The decision on whether the command should provide the service or have the service contracted out into the community was based on the project's Time Breakeven and ROI. Time Breakeven is one form of Breakeven Analysis. The Time Breakeven period is more commonly referred to as 'Payback' or 'Payback period' and is one of the simpler methods of looking at one or more investment opportunities (Value Based Management.net, 2005a). The payback period measures the amount of time it takes for a project to recoup the investment amount contributed. For example, if \$100,000 is invested in a project and the project produces net revenues of \$25,000 annually, the payback period would be four years. The information is useful because it helps an organization to determine how long it will take before the funds contributed for one project will be available for another project or purpose. The payback period helps identify the liquidity of a specific project (Gapenski, 2003). Understanding all of that, the payback period has two inherent problems. The first problem is that the payback period overlooks any benefits that occur after the break-even point. The other problem is that it does not take into account the time value of money—a dollar today is worth more than a dollar tomorrow (2005a). For this reason, other decision criteria are used in conjunction with the payback period analysis.

One of the most important considerations for taking on a project is its expected profitability. ROI is a profitability analysis, which is commonly used to assess this criterion. ROI can be expressed in dollars (Net Present Value) and/or percentages (Internal Rate of Return) (Gapenski, 2003). Net Present Value (NPV) is the difference between the expected cash inflows minus the initial investment for that project. If the resulting NPV is positive the project should be undertaken (Value Based Management.net, 2005b).

Similar to NPV, the Internal Rate of Return (IRR) uses similar principles and mathematic functions. IRR is very popular because many people find it easier to understand than NPV. Additionally, IRR can be calculated without the requirement of estimating the 'exact' cost of capital. When using IRR, the decision to accept a project, the hurdle rate, is made if the IRR surpasses the cost of capital. When two or more projects have a favorable NPV and IRR, the project with the greater NPV should be accepted. "The aim should not be to maximize the Internal Rate of Return, but to maximize Net Present Value" (Value Based Management.net, 2005c, p.1).

The decision criterion for the payback period is 3.5 years. The 'preferred' return on investment is 25% for the first year and 140% for the first five years. The first year and five year ROIs were chosen because of its historical use. In December

2003, these two ROIs were used as decision criteria and were not achieved and BUMED rejected the projects approval (NHB, 2003). With that being said, the resulting return on investment is not a non-compromising decision criterion; however, it is likely that LDRP suites would be recommended for installation if the percentages were considerably lower than the previously identified goal.

Sensitivity Analysis

A sensitivity analysis was performed to determine what affect the percentage of beneficiaries recaptured, which are presently utilizing the ERSA, will have on the overall profitability of recapturing obstetrical in-patient care. If a minor adjustment in the assumption variable results in a large change in the resulting output, the room for error is lessened. The sensitivity analysis that I employed utilized the "best case" scenario (recapturing 100%; the "most-likely" scenario (recapturing 75%); and the "less-likely" scenario (recapturing 50%). It is expected that 100% of the personnel already receiving care through the command's ERSA will continue to do so. This decision is based on the fact that these beneficiaries have already chosen to receive all of their outpatient OB care at NHB, even though the option to receive this care out in town is available. The decision is directly related to the literature

that found that continuity of care contributes immeasurably to patient satisfaction and loyalty (Gilmore, 2003b).

Limitations

There are four major limitations that have been made in order to address this issue as accurately as possible. The first limitation is the assumption that the population demographics and utilization rates will remain the same into the future years. Secondly, it is also assumed that as inflation increases so will variable costs. The third limitation is the assumption that no 'big ticket' equipment items will become obsolete or useless during this period. The final major limitation of the data used for this project is that over 75% of the quantitative data utilized in the study was generated during a period of war. The number of births could realistically increase once the deployed members return. This would greatly affect the feasibility of the project.

Data Reliability and Validity

Data reliability and validity are two characteristics of sound measurement. Data that is not reliable or valid is of no use to anyone or for any reason. Reliability is the ability of a measurement tool to produce the same results consistently over repeated attempts. Validity is the ability of a measurement tool to produce accurate results for the item of interest (Cooper & Schindler, 2003). Therefore, you can have reliability without

validity, but you cannot have validity without reliability. I will use a bathroom scale scenario in order to simplify the aforementioned information. If a bathroom scale consistently measures you over your true weight by 10 pounds, the scale is reliable; however, it is not valid. If that same scale is consistently wrong and the amount of error is unpredictable, the scale is not reliable or valid. If the scale consistently provides the accurate weight of the person being weighed, it is reliable and valid (2003).

The data used in this study is reliable and valid and was extracted from databases, which are automatically populated. These systems are constantly monitored and managed by experienced data quality experts and relied upon by service level executives. The analyses derived from these systems are used on a daily basis to make clinical, administrative, and financial decisions throughout the Department of Defense. Therefore, the reliability and validity of these sources and its information is of little to no concern. Since no patient identifying or protected health information was accessed during the acquisition of this data, preserving patient privacy will not be an issue

The Results

The results of this analysis have proven to be contrary to my initial belief. This study proves that it would be more

beneficial to continue business in its present form. The proposed idea of bringing all of the obstetrical in-patient care, which is being performed under the ERSA, back in-house is not a financially viable option. The data displayed on the following charts under 'Net Operating Revenue' and 'Net Operating Expense' provides the resulting decision criterion utilized to assess the financial practicality of the project. The specific information used to provide this information is provided under Appendix B.

The 'Best Case' scenario shows a net loss of \$987,083 (-29% ROI) in the first year and a five-year ROI of 97%. This scenario is based on a 100% recapture rate of the projected demand of 500 deliveries. Our decision criteria were set at 3.5 years payback and 25% ROI in the first year, and 140% ROI for the five year period; neither of these three were achieved. Actually, as displayed in Table 1, the payback period was 32% longer (5.146 yrs), the first year ROI was in the red (-29%), and the project did not breakeven within the first five years.

Table 3.

Return on Investment and Payback Calculations (100% Recapture Rate)

Return on Investment and Payback Calculations – 100% Recapture Rate						
	Year 1	Year 2	Year 3	Year 4	Year 5	Five Year Ave
Net Operating Revenue	\$ 2,228,095	\$ 2,340,495	\$ 2,458,572	\$ 2,532,329	\$ 2,608,299	\$ 2,433,558
Net Operating Expenses	\$ 3,215,178	\$ 1,353,968	\$ 1,393,926	\$ 1,435,088	\$ 1,477,491	\$ 1,775,130
Net Income (Loss)	\$ (987,083)	\$ 986,527	\$ 1,064,646	\$ 1,097,241	\$ 1,130,808	\$ 658,428
Best Case Scenario						
Five Year Cumulative Net Income		\$ 3,292,138				
Average Net Income		\$ 658,428				
Investment		\$ 3,388,386				
Return on Investment in first year		-29%				
Return on Investment for 5 years		97%				
Years Payback		5.146				
Months Payback		62				

The sensitivity analysis revealed that the volume of patients recaptured would grossly manipulate and decrease the opportunity for profit. In addition to the previously displayed 'Best Case' scenario (Table 2), a sensitivity analysis was performed using two other recapture volume scenarios. These two scenarios contained a 75% recapture volume ('Most-Likely') and a 50% recapture volume ('Less-Likely'). The resulting payback period for the 'Most-Likely' scenario was 32.151 years, while the payback period for the 'Less-likely' payback period was displayed as 'N/A' (see Tables 4 and 5).

Table 4.

Return on Investment and Payback Calculations (75% Recapture Rate)

Return on Investment and Payback Calculations – 75% Recapture Rate						
	Year 1	Year 2	Year 3	Year 4	Year 5	Five Year Ave
Net Operating Revenue	\$ 1,675,376	\$ 1,759,808	\$ 1,848,503	\$ 1,903,958	\$ 1,961,077	\$ 1,829,744
Net Operating Expenses	\$ 3,166,530	\$ 1,304,280	\$ 1,343,175	\$ 1,383,250	\$ 1,424,540	\$ 1,724,355
Net Income (Loss)	\$ (1,491,154)	\$ 455,528	\$ 505,328	\$ 520,708	\$ 536,536	\$ 105,389
Most-Likely Scenario						
Five Year Cumulative Net Income		\$ 526,947				
Average Net Income		\$ 105,389				
Investment		\$ 3,388,386				
Return on Investment in first year		-44%				
Return on Investment for 5 years		16%				
Years Payback		32.151				
Months Payback		386				

Table 5.

Return on Investment and Payback Calculations (50% Recapture Rate)

Return on Investment and Payback Calculations – 50% Recapture Rate						
	Year 1	Year 2	Year 3	Year 4	Year 5	Five Year Ave
Net Operating Revenue	\$ 1,122,334	\$ 1,178,783	\$ 1,238,078	\$ 1,275,220	\$ 1,313,476	\$ 1,225,578
Net Operating Expenses	\$ 3,123,390	\$ 1,260,159	\$ 1,298,048	\$ 1,337,091	\$ 1,377,325	\$ 1,679,202
Net Income (Loss)	\$ (2,001,056)	\$ (81,376)	\$ (59,970)	\$ (61,871)	\$ (63,849)	\$ (453,624)
Less-Likely Scenario						
Five Year Cumulative Net Income		\$ (2,268,122)				
Average Net Income		\$ (453,624)				
Investment		\$ 3,388,386				
Return on Investment in first year		-59%				
Return on Investment for 5 years		-67%				
Years Payback		N/A				
Months Payback		N/A				

This is due to a flaw in the VCI tool, which calculates the payback period by dividing the five-year average net income by the investment. The problem comes when there is a negative five-year average net income, as in the case of the 'Less-likely' scenario. Nevertheless, bringing obstetrical in-patient care back to the MTF is not a practical option, especially when considering the volatility associated with volume (annual deliveries).

Discussion

The volume of patients recaptured played a major role in whether this project would be financially feasible or not. As revealed in this paper, anything less than a 100% recapture rate (500 deliveries) greatly impacted the payback period and overall profitability of the project. The forecasted annual births, (500), provides some possibility for steady and continued profits; but, profitability seems almost non-existent when one couples the low number of births with the initial investment costs and the number of personnel required to staff the department 24 hours a day.

Additionally, the lack of requirement to obtain a non-availability statement for OB care will continue to grow in awareness. The more people who start to become aware of this benefit, the more that will be likely to exercise it. Patients

perceive civilian provided OB care to be of a higher quality than military provided OB care (Gilmore, 2003b).

This perception puts the military in a new position. Never before has the military had to look at its civilian counterparts as competitors. Now, the military must compete for patients that were once a 'given', and in doing so, it must justify and substantiate its existence. It has been stated by Abraham, Gaynor, & Vogt (2003), that competition breeds quality and excellence. When viewed in a positive light, the newly found competition (civilian health care facilities) leaves the military health system with another avenue for displaying its quality and excellence. Now is the time for military medicine to broadcast its world-class quality and excellence, which has been and is present in military medicine today.

Conclusion and Recommendation

The purpose of this paper was to determine whether it would be financially feasible and beneficial to recapture the in-patient obstetrical patients currently utilizing the External Resource-Sharing Agreement. It is evident that this question produces a resounding 'NO'! The possibility of recapturing the necessary volume to make this decision favorable for the command is low. Therefore, given the findings of this study, I would not recommend making modifications to the future hospital to incorporate OB inpatient care. The National Defense

Authorization Act's removal of the NAS further decreases the likelihood of recapturing the necessary amount. At this point in time, the 'status quo', (current ERSA), is the most financially practical path for the command and the NAVMED East. In a time of constrained resources, approved projects must be, without a doubt, financially beneficial for the involved parties. Currently, the ERSA is the solution.

The need for future research is highly recommended. Of course, the investment costs will change because of the uncertainty regarding the construction status of the new facility. With that being said, the future volume of in-patient obstetrical care will be the driving force behind the decision of whether to bring the service back in-house or not. Over 75% of the quantitative data utilized in the study was generated during a period of war. It is safe to assume that eventually, the war will end and the resulting deployments will at least lessen. This change in atmosphere may also lead to a change in enlistments and commissioning which could affect the demographics of our service and its beneficiaries. Future studies should adjust for these above confounders when forecasting military inpatient OB demand.

Appendix A

ROOM NAME	ROOM QTY	JSN	NOMENCLATURE	ITEM QTY PER		PRICE	TOTAL COSTS
				RM	UI		
DEPT HEAD	1	A6046	Artwork, Decorative, With Frame	1	EA	\$164	\$164
		A6305	Drapes, Pair	1	SY	\$58	\$58
		F0110	Bookcase, 3 Shelf	1	EA	\$289	\$289
		F0205	Chair, Side With Arms	1	EA	\$470	\$470
		F0280	Chair, Swivel, Low Back	1	EA	\$869	\$869
		F0405	Cabinet, Filing, Full Height, 4-5 Drawer	1	EA	\$361	\$361
		F0410	Cabinet, Filing, Half Height, 2 Drawer	1	EA	\$217	\$217
		F0635	Desk, Double Pedestal, 30 x 60 x 30	1	EA	\$555	\$555
		F2000	Basket, Wastepaper, Round, Metal, 18 H x 16 Dia.	1	EA	\$40	\$40
		F3200	Clock, Battery, 12" Diameter	1	EA	\$51	\$51
		M1800	Computer, Microprocessing	1	EA	\$5,272	\$5,272
		M1825	Printer, Computer	1	EA	\$2,044	\$2,044
LCPO OFFICE	1	A6046	Artwork, Decorative, With Frame	1	EA	\$164	\$164
		A6305	Drapes, Pair	1	SY	\$58	\$58
		F0110	Bookcase, 3 Shelf	1	EA	\$289	\$289
		F0205	Chair, Side With Arms	1	EA	\$470	\$470
		F0280	Chair, Swivel, Low Back	1	EA	\$869	\$869
		F0405	Cabinet, Filing, Full Height, 4-5 Drawer	1	EA	\$361	\$361
		F0410	Cabinet, Filing, Half Height, 2 Drawer	1	EA	\$217	\$217
		F0635	Desk, Double Pedestal, 30 x 60 x 30	1	EA	\$555	\$555
		F2000	Basket, Wastepaper, Round, Metal, 18 H x 16 Dia.	1	EA	\$40	\$40
		F3200	Clock, Battery, 12" Diameter	1	EA	\$51	\$51
		M1800	Computer, Microprocessing	1	EA	\$5,272	\$5,272
		M1825	Printer, Computer	1	EA	\$2,044	\$2,044
NURSES STATION	2	E0906	Locker, Supply, General, Wall Mtd, 23"W x 20"D	1	EA	\$4,141	\$8,282
		E0912	Locker, Supply, Med Surg, Wall Mtd	1	EA	\$4,044	\$8,088
		E0921	Transporter, Locker, Supply, 27"W x 25"D	1	EA	\$989	\$1,978
		E1500	Rail, MOD, W/MNTD, HX144XD	1	EA	\$277	\$554
		F0210	Chair, Side, Without Arms	2	EA	\$330	\$1,320
		F0280	Chair, Swivel, Low Back	3	EA	\$869	\$5,214
		F0470	Cabinet, Television / Video Recorder	1	EA	\$869	\$1,738
		F0535	Cart, Utility	1	EA	\$541	\$1,082
		F2000	Basket, Wastepaper, Round, Metal, 18 H x 16 Dia.	6	EA	\$40	\$480
		F2050	Recorder, Cassette Tape, Audio	1	EA	\$57	\$114
		F3200	Clock, Battery, 12" Diameter	1	EA	\$51	\$102
		M0425	Monitor, Television	1	EA	\$457	\$914
		M0430	Recorder / Player, Cassette, Video	1	EA	\$3,115	\$6,230
		M1800	Computer, Microprocessing	1	EA	\$5,272	\$10,544
		M1805	Copier, Bench Top	1	EA	\$7,637	\$15,274
		M1820	Imprinter, Data Record, Electric	1	EA	\$764	\$1,528
		M1822	Imprinter, Data Record, Manual	1	EA	\$83	\$166

		M1825 Printer, Computer	1	EA	\$2,044	\$4,088
		M1850 Typewriter, Electric	1	EA	\$1,040	\$2,080
		X3930 Illuminator, Film, Double, Wall Mounted, 20x29x6	1	EA	\$812	\$1,624
SUB-NURSE STATION	1	E0051 Workstation, Corner Work Surface, Wall Mtd, 72x48	6	EA	\$6,207	\$37,242
		E0212 Worksurface, w/Overhd Cab & Drwrs, Wall Mtd, 48" W	6	EA	\$5,113	\$30,678
		E0906 Locker, Supply, General, Wall Mtd, 23"W x 20"D	1	EA	\$4,141	\$4,141
		E0912 Locker, Supply, Med Surg, Wall Mtd	1	EA	\$4,044	\$4,044
		E0921 Transporter, Locker, Supply, 27"W x 25"D	1	EA	\$989	\$989
		E1500 Rail, MOD, W/MNTD, HX144XD	1	EA	\$277	\$277
		F0210 Chair, Side, Without Arms	1	EA	\$330	\$330
		F0280 Chair, Swivel, Low Back	9	EA	\$869	\$7,821
		F0470 Cabinet, Television / Video Recorder	1	EA	\$869	\$869
		F2000 Basket, Wastepaper, Round, Metal, 18 H x 16 Dia.	6	EA	\$40	\$240
		F2050 Recorder, Cassette Tape, Audio	1	EA	\$57	\$57
		F3200 Clock, Battery, 12" Diameter	1	EA	\$51	\$51
		M0425 Monitor, Television	1	EA	\$457	\$457
		M0430 Recorder / Player, Cassette, Video	1	EA	\$3,115	\$3,115
		M1800 Computer, Microprocessing	1	EA	\$5,272	\$5,272
		M1805 Copier, Bench Top	1	EA	\$7,637	\$7,637
		M1820 Imprinter, Data Record, Electric	3	EA	\$764	\$2,292
		M1825 Printer, Computer	2	EA	\$2,044	\$4,088
		M1850 Typewriter, Electric	1	EA	\$1,040	\$1,040
		M1855 Facsimile Machine	1	EA	\$908	\$908
		M2055 Shelving, Storage, Wire, CRS, w/Adjustable Shelves	1	EA	\$1,845	\$1,845
		M7655 Defibrillator/Cardioscope, 5-Lead	1	EA	\$10,789	\$10,789
		M7660 Defibrillator/Monitor/Recorder, Portable	1	EA	\$12,799	\$12,799
		M7665 Defibrillator/Monitor/Recorder Automatic	1	EA	\$12,600	\$12,600
		M7850 Monitor, Physiological, Central, 8 Bed, Color	3	EA	\$32,000	\$96,000
		M7910 Thermometer, Electronic	6	EA	\$505	\$3,030
		X3930 Illuminator, Film, Double, Wall Mounted, 20x29x6	1	EA	\$812	\$812
PATIENT EDUCATION	1	A6046 Artwork, Decorative, With Frame	1	EA	\$164	\$164
		F0115 Bookcase, Open, 5 Shelf	2	EA	\$507	\$1,014
		F0220 Chair, Conference	1	EA	\$765	\$765
		F0250 Chair, Arm, Lounge Type	2	EA	\$460	\$920
		F0295 Chair, Stacking, 34 X 21 X 24	1	EA	\$87	\$87
		F0465 Cabinet, Storage, 2 Door, 5 Shelf	1	EA	\$609	\$609
		F0470 Cabinet, Television / Video Recorder	1	EA	\$869	\$869
		F0700 Table, Computer, Medium Size	1	EA	\$334	\$334
		F0735 Table, Coffee, 18 X 52 X 24	1	EA	\$441	\$441
		F0740 Table, Occasional, Lamp, 20 x 27 x 27	2	EA	\$392	\$784
		F0755 Table, Conference, Wood, 30 x Var x Var	1	EA	\$1,722	\$1,722
		F0835 Stand, Projection	1	EA	\$289	\$289
		F2000 Basket, Wastepaper, Round, Metal, 18 H x 16 Dia.	1	EA	\$40	\$40
		F2105 Lectern, Mobile, With Self Contained Audio	1	EA	\$835	\$835
		F2225 Projector, Overhead	1	EA	\$750	\$750
		F2305 Rack, Magazine, F/S	2	EA	\$401	\$802

		F2420 Lamp, Table, With Shade	2	EA	\$313	\$626
		F3200 Clock, Battery, 12" Diameter	1	EA	\$51	\$51
		M0415 Projector, Slide, Carousel	1	EA	\$625	\$625
		M0425 Monitor, Television	1	EA	\$457	\$457
		M0430 Recorder / Player, Cassette, Video	1	EA	\$3,115	\$3,115
		M0440 Projector, Video	1	EA	\$8,686	\$8,686
PHYS WORKRM/DICTN	1	A5075 Dispenser, Soap, Disposable	1	EA	\$18	\$18
		A5108 Waste Disposal Unit, Sharps	1	EA	\$217	\$217
		E0948 Cart, General Storage, Mobile, 42"H x 32"W x 22"D	1	EA	\$2,222	\$2,222
		F2010 Basket, Wastepaper, Step-On	1	EA	\$130	\$130
		F3200 Clock, Battery, 12" Diameter	1	EA	\$51	\$51
		M0750 Flowmeter, Air, Connect w/50 PSI Supply	1	EA	\$129	\$129
		M0755 Flowmeter, Oxygen, Low Flow	1	EA	\$113	\$113
		M0765 Regulator, Vacuum	1	EA	\$389	\$389
		M0800 Center, Infant Care	1	EA	\$22,983	\$22,983
		M3070 Hamper, Linen, Mobile, w/Lid	1	EA	\$642	\$642
		M4200 Otoscope/Ophthalmoscope, Wall Mounted	1	EA	\$1,200	\$1,200
		M8810 Stand, Mayo	1	EA	\$700	\$700
		M8830 Table, Instrument/Dressing, Mobile, 34x20x16	1	EA	\$852	\$852
		X3990 Illuminator, Film, 4 Panels, Wall Mounted	1	EA	\$1,780	\$1,780
EXAM/PREP/TEST ROOM	2	A5075 Dispenser, Soap, Disposable	1	EA	\$18	\$36
		A5107 Dispenser, Glove, Surgical/Examination, Wall Mntd	1	EA	\$43	\$86
		A5108 Waste Disposal Unit, Sharps	1	EA	\$217	\$434
		E0948 Cart, General Storage, Mobile, 42"H x 32"W x 22"D	1	EA	\$2,222	\$4,444
		F0205 Chair, Side With Arms	1	EA	\$470	\$940
		F0280 Chair, Swivel, Low Back	1	EA	\$869	\$1,738
		F0355 Footstool, Straight	1	EA	\$218	\$436
		F0690 Workstation, Computer, Enclosed, With Lock	1	EA	\$933	\$1,866
		F2010 Basket, Wastepaper, Step-On	1	EA	\$130	\$260
		F3200 Clock, Battery, 12" Diameter	1	EA	\$51	\$102
		M1800 Computer, Microprocessing	1	EA	\$5,272	\$10,544
		M1825 Printer, Computer	1	EA	\$2,044	\$4,088
		M4100 Sphygmomanometer, Aneroid, Wall Mounted	1	EA	\$248	\$496
		M4200 Otoscope/Ophthalmoscope, Wall Mounted	1	EA	\$1,200	\$2,400
		M7420 Light, Exam, Mobile	1	EA	\$2,763	\$5,526
		M8945 Stool, Surgeon, Revolving	1	EA	\$601	\$1,202
		M9025 Table, Examination/Treatment, With Cabinet	1	EA	\$2,000	\$4,000
		X3830 Illuminator, Film, Single, Wall Mounted, 20x17x5	1	EA	\$273	\$546
PROCEDURE ROOM	1	A5075 Dispenser, Soap, Disposable	1	EA	\$18	\$18
		A5107 Dispenser, Glove, Surgical/Examination, Wall Mntd	1	EA	\$43	\$43
		E0903 Locker, Supply, w/Shelves, Wall Mtd, 23"W x 20"D	1	EA	\$2,900	\$2,900
		E0912 Locker, Supply, Med Surg, Wall Mtd	1	EA	\$4,044	\$4,044
		E0921 Transporter, Locker, Supply, 27"W x 25"D	2	EA	\$989	\$1,978
		E0948 Cart, General Storage, Mobile, 42"H x 32"W x 22"D	1	EA	\$2,222	\$2,222
		E0951 Cart, Proctology Treatment, Mobile	1	EA	\$2,475	\$2,475

		E1500 Rail, MOD, W/MNTD, HX144XD	1	EA	\$277	\$277
		F2010 Basket, Wastepaper, Step-On	1	EA	\$130	\$130
		F3200 Clock, Battery, 12" Diameter	1	EA	\$51	\$51
		M0800 Center, Infant Care	1	EA	\$22,983	\$22,983
		M3070 Hamper, Linen, Mobile, w/Lid	1	EA	\$642	\$642
		M3072 Frame, Infectious Waste Bag w/Lid	1	EA	\$615	\$615
PATIENT TOILET	2	A5075 Dispenser, Soap, Disposable	1	EA	\$18	\$36
		F2000 Basket, Wastepaper, Round, Metal, 18 H x 16 Dia.	1	EA	\$40	\$80
NOURISHMENT CENTER	1	A5075 Dispenser, Soap, Disposable	1	EA	\$18	\$18
		F2010 Basket, Wastepaper, Step-On	1	EA	\$130	\$130
		F3200 Clock, Battery, 12" Diameter	1	EA	\$51	\$51
		K1552 Brewer, Coffee, Auto, Elect, 3 Burner, Front/Back	1	EA	\$1,449	\$1,449
		K8250 Toaster, Pop-Up, 4 Slice, Electric	1	EA	\$1,359	\$1,359
		R7250 Refrigerator/Freezer, 20 Cubic Feet	1	EA	\$1,290	\$1,290
LDRP PATIENT ROOM	6	A5075 Dispenser, Soap, Disposable	1	EA	\$18	\$108
		A6046 Artwork, Decorative, With Frame	1	EA	\$164	\$984
		E0912 Locker, Supply, Med Surg, Wall Mtd	1	EA	\$4,044	\$24,264
		E1500 Rail, MOD, W/MNTD, HX144XD	1	EA	\$277	\$1,662
		F0260 Chair, High Back, Patient	1	EA	\$784	\$4,704
		F0315 Chair, Sleeper	1	EA	\$1,578	\$9,468
		F0340 Stool, Self Adjusting	1	EA	\$301	\$1,806
		F0355 Footstool, Straight	1	EA	\$218	\$1,308
		F0400 Cabinet, Bedside, Door, Drawer, 31 x 21 x 19	1	EA	\$566	\$3,396
		F0470 Cabinet, Television / Video Recorder	1	EA	\$869	\$5,214
		F2000 Basket, Wastepaper, Round, Metal, 18 H x 16 Dia.	1	EA	\$40	\$240
		F3200 Clock, Battery, 12" Diameter	1	EA	\$51	\$306
		M0425 Monitor, Television	1	EA	\$457	\$2,742
		M0430 Recorder / Player, Cassette, Video	1	EA	\$3,115	\$18,690
		M0800 Center, Infant Care	1	EA	\$22,983	\$137,898
		M4100 Sphygmomanometer, Aneroid, Wall Mounted	1	EA	\$248	\$1,488
		M7000 Bed, Birthing, Electric	1	EA	\$15,154	\$90,924
		M7820 Monitor, Fetal, Bedside/Stand Alone	1	EA	\$7,676	\$46,056
LDRP PATIENT TOILET	6	A5075 Dispenser, Soap, Disposable	1	EA	\$18	\$108
		F2000 Basket, Wastepaper, Round, Metal, 18 H x 16 Dia.	1	EA	\$40	\$240
ANTEROOM	1	A5075 Dispenser, Soap, Disposable	1	EA	\$18	\$18
		F2010 Basket, Wastepaper, Step-On	1	EA	\$130	\$130
		M3070 Hamper, Linen, Mobile, w/Lid	1	EA	\$642	\$642
ISOLATION NURSERY	1	A5075 Dispenser, Soap, Disposable	1	EA	\$18	\$18
		A5108 Waste Disposal Unit, Sharps	1	EA	\$217	\$217
		F2010 Basket, Wastepaper, Step-On	1	EA	\$130	\$130
		F3200 Clock, Battery, 12" Diameter	1	EA	\$51	\$51
		M0750 Flowmeter, Air, Connect w/50 PSI Supply	1	EA	\$129	\$129

		M0755 Flowmeter, Oxygen, Low Flow	1	EA	\$113	\$113
		M0760 Proportioner (Blender), Oxygen/Air	1	EA	\$1,383	\$1,383
		M0765 Regulator, Vacuum	1	EA	\$389	\$389
		M0800 Center, Infant Care	1	EA	\$22,983	\$22,983
		M4200 Otoscope/Ophthalmoscope, Wall Mounted	1	EA	\$1,200	\$1,200
		M7815 Monitor, ECG/Respiration, Infant (Apnea)	1	EA	\$4,514	\$4,514
		M7855 Monitor, Physiological, Infant.	1	EA	\$20,806	\$20,806
		M7905 Oximeter, Pulse	1	EA	\$3,662	\$3,662
EMERG C-SECTION ROOM	2	E0903 Locker, Supply, w/Shelves, Wall Mtd, 23"W x 20"D	1	EA	\$2,900	\$5,800
		E0906 Locker, Supply, General, Wall Mtd, 23"W x 20"D	4	EA	\$4,141	\$33,128
		E0948 Cart, General Storage, Mobile, 42"H x 32"W x 22"D	1	EA	\$2,222	\$4,444
		E1500 Rail, MOD, W/MNTD, HX144XD	2	EA	\$277	\$1,108
		M0500 Television, Color, 20" Diagonal	1	EA	\$544	\$1,088
		M0505 Television, Color, Bedside	2	EA	\$1,421	\$5,684
		M1820 Imprinter, Data Record, Electric	1	EA	\$764	\$1,528
		M3070 Hamper, Linen, Mobile, w/Lid	2	EA	\$642	\$2,568
		M3175 Electrosurgical Unit, Dual Output	1	EA	\$6,869	\$13,738
		M4255 Stand, IV, Adjustable	2	EA	\$453	\$1,812
		M5512 Laser, Smoke Evacuator	1	EA	\$4,002	\$8,004
		M5585 Gonioscope, Lens, Contact	1	EA	\$485	\$970
		M7715 Electrocardiograph, Portable, Single Channel	1	EA	\$4,620	\$9,240
		M7900 Monitor, Anesthesia/Respiratory Gas	1	EA	\$46,341	\$92,682
		M8525 Laser, Surgical, Co2, Mobile	1	EA	\$137,501	\$275,002
		M8900 Carriage, Pail, CRS, Without Pail	4	EA	\$191	\$1,528
		M8905 Pail, Utility, CRS, Without Carriage	4	EA	\$87	\$696
		M8910 Cart, Surgical Case	2	EA	\$4,225	\$16,900
		M8920 Stand, Basin, CRS, Mobile, Double	1	EA	\$658	\$1,316
		M8925 Stand, Basin, CRS, Mobile, Single	2	EA	\$375	\$1,500
		M8945 Stool, Surgeon, Revolving	2	EA	\$601	\$2,404
		M8950 Warmer, Blood	1	EA	\$6,927	\$13,854
		M9055 Table, Exam, Orthopedic	1	EA	\$1,389	\$2,778
		M9080 Table, Operating, Pedestal, 5 Section	1	EA	\$53,334	\$106,668
SCRUB ROOM	1	F2010 Basket, Wastepaper, Step-On	1	EA	\$130	\$130
		F3200 Clock, Battery, 12" Diameter	1	EA	\$51	\$51
		M3070 Hamper, Linen, Mobile, w/Lid	1	EA	\$642	\$642
DECON/CLEAN-UP	1	A5075 Dispenser, Soap, Disposable	1	EA	\$18	\$18
		F2010 Basket, Wastepaper, Step-On	1	EA	\$130	\$130
CONFERENCE/REPORT RM	1	A6046 Artwork, Decorative, With Frame	1	EA	\$164	\$164
		F0220 Chair, Conference	1	EA	\$765	\$765
		F0470 Cabinet, Television / Video Recorder	1	EA	\$869	\$869
		F0535 Cart, Utility	1	EA	\$541	\$541
		F0755 Table, Conference, Wood, 30 x Var x Var	1	EA	\$1,722	\$1,722
		F2000 Basket, Wastepaper, Round, Metal, 18 H x 16 Dia.	3	EA	\$40	\$120
		F2105 Lectern, Mobile, With Self Contained Audio	1	EA	\$835	\$835
		F2225 Projector, Overhead	1	EA	\$750	\$750
		F3200 Clock, Battery, 12" Diameter	1	EA	\$51	\$51

ON CALL ROOM	2	M0415 Projector, Slide, Carousel	1	EA	\$625	\$625
		M0425 Monitor, Television	1	EA	\$457	\$457
		M0430 Recorder / Player, Cassette, Video	1	EA	\$3,115	\$3,115
		M0507 Video Teleconferencing System	1	EA	\$29,792	\$29,792
		F0205 Chair, Side With Arms	1	EA	\$470	\$940
		F0255 Chair, Easy	1	EA	\$862	\$1,724
		F0400 Cabinet, Bedside, Door, Drawer, 31 x 21 x 19	1	EA	\$566	\$1,132
		F0710 Table, Computer, With Print Shelf	1	EA	\$435	\$870
		F0720 Table, Writing, 29"H X 30"W X 18"D	1	EA	\$150	\$300
		F2000 Basket, Wastepaper, Round, Metal, 18 H x 16 Dia.	2	EA	\$40	\$160
		F2400 Bed, Bunk, Watchroom	1	EA	\$948	\$1,896
		F2420 Lamp, Table, With Shade	1	EA	\$313	\$626
		F3200 Clock, Battery, 12" Diameter	1	EA	\$51	\$102
CLEAN UTILITY ROOM	1	M0500 Television, Color, 20" Diagonal	1	EA	\$544	\$1,088
		A5075 Dispenser, Soap, Disposable	1	EA	\$18	\$18
		A5107 Dispenser, Glove, Surgical/Examination, Wall Mntd	1	EA	\$43	\$43
		E0906 Locker, Supply, General, Wall Mtd, 23"W x 20"D	2	EA	\$4,141	\$8,282
		E0912 Locker, Supply, Med Surg, Wall Mtd	2	EA	\$4,044	\$8,088
		E0921 Transporter, Locker, Supply, 27"W x 25"D	3	EA	\$989	\$2,967
		E1500 Rail, MOD, W/MNTD, HX144XD	3	EA	\$277	\$831
		F0295 Chair, Stacking, 34 X 21 X 24	5	EA	\$87	\$435
		F0525 Cart, Supply	2	EA	\$1,100	\$2,200
		F2000 Basket, Wastepaper, Round, Metal, 18 H x 16 Dia.	1	EA	\$40	\$40
		M0750 Flowmeter, Air, Connect w/50 PSI Supply	10	EA	\$129	\$1,290
		M0755 Flowmeter, Oxygen, Low Flow	10	EA	\$113	\$1,130
		M0765 Regulator, Vacuum	20	EA	\$389	\$7,780
		M2100 Cart, Shelving, Storage, Mobile, 72" X 48" X 24"	2	EA	\$2,820	\$5,640
		M3010 Bed, Air-Fluidized	1	EA	\$57,943	\$57,943
		M4005 Scale, In-Bed, 400 Pound Capacity	1	EA	\$5,366	\$5,366
		M4035 Scale, Sling Type, Digital Read-Out	1	EA	\$4,986	\$4,986
		M4265 Pump, Volumetric, Infusion, Single Line	15	EA	\$4,943	\$74,145
		M4266 Pump, Volumetric, Infusion, Multiple Line	4	EA	\$9,287	\$37,148
		M4270 Pump, Enteral Feeding	1	EA	\$921	\$921
		M4275 Pump, Continuous, Analgesia (PCA)	1	EA	\$6,862	\$6,862
		M4280 Pump, Pneumatic Stocking/Cuff	8	EA	\$2,569	\$20,552
		M4815 Hypo/Hyperthermia Unit, Automatic/Manual, Mobile	1	EA	\$9,872	\$9,872
		M7010 Bed, Patient, Electric	1	EA	\$7,626	\$7,626
		M7660 Defibrillator/Monitor/Recorder, Portable	2	EA	\$12,799	\$25,598
		M8335 Exerciser, Continuous Passive Motion (CPM)	3	EA	\$3,824	\$11,472
		M8770 Aspirator/Pressure Unit, General Purpose	4	EA	\$1,648	\$6,592
MED PREP/UNT DOSE	1	A5075 Dispenser, Soap, Disposable	1	EA	\$18	\$18
		A5107 Dispenser, Glove, Surgical/Examination, Wall Mntd	1	EA	\$43	\$43
		E0906 Locker, Supply, General, Wall Mtd, 23"W x 20"D	1	EA	\$4,141	\$4,141
		E0912 Locker, Supply, Med Surg, Wall Mtd	1	EA	\$4,044	\$4,044
		E0921 Transporter, Locker, Supply, 27"W x 25"D	1	EA	\$989	\$989
		E0957 Cart, Medication, Mobile, 68"H x 54"W x 22"D	1	EA	\$3,115	\$3,115

		E1500 Rail, MOD, W/MNTD, HX144XD	1	EA	\$277	\$277
		F0705 Table, Computer, Small, 35 x 36 x 30	1	EA	\$350	\$350
		F2015 Basket, Wastepaper, Metal/Plastic, 2 Swinging Doors	1	EA	\$325	\$325
		F3200 Clock, Battery, 12" Diameter	1	EA	\$51	\$51
		M1800 Computer, Microprocessing	1	EA	\$5,272	\$5,272
		M1825 Printer, Computer	1	EA	\$2,044	\$2,044
		M7250 Cart, Medication, Unit Dose	1	EA	\$4,760	\$4,760
		R7000 Refrigerator, 14 Cubic Feet, 64x28x29	1	EA	\$756	\$756
HOUSEKEEPING/JC	1	A5075 Dispenser, Soap, Disposable	1	EA	\$18	\$18
		A5107 Dispenser, Glove, Surgical/Examination, Wall Mntd	1	EA	\$43	\$43
		F0500 Cart, Janitor's	1	EA	\$434	\$434
		F0505 Bucket, Mop, With Wringer, 26 Quart	1	EA	\$116	\$116
		F2485 Cleaner, Carpet, Vacuum, Industrial	1	EA	\$491	\$491
		F2490 Cleaner, Carpet / Floor, Vacuum, Portable	1	EA	\$207	\$207
		F2525 Burnisher, Floor	1	EA	\$1,712	\$1,712
		M2600 Vacuum, Wet/Dry, HEPA Filtration	1	EA	\$2,661	\$2,661
CLEAN LINEN STG	2	M2070 Shelving, Storage, 77hx36wx18d	1	EA	\$153	\$306
ON CALL						
TOILET/SHOWER	2	A5075 Dispenser, Soap, Disposable	1	EA	\$18	\$36
		F2000 Basket, Wastepaper, Round, Metal, 18 H x 16 Dia.	1	EA	\$40	\$80
SOILED LINEN	1	E0715 Table, Process, Adj Height, 9 Drawer	2	EA	\$4,031	\$8,062
		F0230 Chair, Drafting, Rotary	2	EA	\$305	\$610
		F0510 Cart, Linen, Soiled	1	EA	\$1,477	\$1,477
		F2020 Can, Trash, 44 Gallon	2	EA	\$88	\$176
		F3200 Clock, Battery, 12" Diameter	1	EA	\$51	\$51
LIT/WHLCHR STORAGE	1	M4655 Stretcher, Mobile, CRS, 9 Position	1	EA	\$8,102	\$8,102
		M4705 Wheelchair, Patient Transport, Folding	1	EA	\$1,561	\$1,561
STAFF LOUNGE	1	A5075 Dispenser, Soap, Disposable	1	EA	\$18	\$18
		A6046 Artwork, Decorative, With Frame	1	EA	\$164	\$164
		F0210 Chair, Side, Without Arms	4	EA	\$330	\$1,320
		F0225 Chair, Dining Room	4	EA	\$341	\$1,364
		F0375 Sofa, Upholstered	1	EA	\$1,580	\$1,580
		F0725 Table, Occasional, Executive, Wood, 21 X 26 X 20	1	EA	\$339	\$339
		F0795 Table, Dining	1	EA	\$642	\$642
		F2000 Basket, Wastepaper, Round, Metal, 18 H x 16 Dia.	2	EA	\$40	\$80
		F3200 Clock, Battery, 12" Diameter	1	EA	\$51	\$51
		K1552 Brewer, Coffee, Auto, Elect, 3 Burner, Front/Back	1	EA	\$1,449	\$1,449
		K4665 Oven, Microwave, Consumer	1	EA	\$313	\$313
		M0500 Television, Color, 20" Diagonal	1	EA	\$544	\$544
		R7000 Refrigerator, 14 Cubic Feet, 64x28x29	1	EA	\$756	\$756
EQUIPMENT STORAGE	2	F0300 Chair, Typist, Swivel	1	EA	\$238	\$476

		F0775 Table, Work, 2 Drawer, 32 x 72 x 30	1	EA	\$738	\$1,476
		F2000 Basket, Wastepaper, Round, Metal, 18 H x 16 Dia.	1	EA	\$40	\$80
		F3200 Clock, Battery, 12" Diameter	1	EA	\$51	\$102
		M2070 Shelving, Storage, 77hx36wx18d	12	EA	\$153	\$3,672
LDRP EQPT STORAGE	6	M2070 Shelving, Storage, 77hx36wx18d	1	EA	\$153	\$918
SOILED UTL/TRASH	1	A5075 Dispenser, Soap, Disposable	1	EA	\$18	\$18
		A5107 Dispenser, Glove, Surgical/Examination, Wall Mntd	1	EA	\$43	\$43
		E1500 Rail, MOD, W/MNTD, HX144XD	1	EA	\$277	\$277
		F0510 Cart, Linen, Soiled	1	EA	\$1,477	\$1,477
		F0530 Cart, Trash	1	EA	\$1,239	\$1,239
		F2020 Can, Trash, 44 Gallon	1	EA	\$88	\$88
		M3070 Hamper, Linen, Mobile, w/Lid	1	EA	\$642	\$642
EMER EQPT STORAGE	1	M2070 Shelving, Storage, 77hx36wx18d	1	EA	\$153	\$153
STERILE STORAGE	1	E0906 Locker, Supply, General, Wall Mtd, 23"W x 20"D	6	EA	\$4,141	\$24,846
		E0921 Transporter, Locker, Supply, 27"W x 25"D	3	EA	\$989	\$2,967
		E1500 Rail, MOD, W/MNTD, HX144XD	2	EA	\$277	\$554
		M8910 Cart, Surgical Case	4	EA	\$4,225	\$16,900
PUBLIC TOILET	1	A5075 Dispenser, Soap, Disposable	1	EA	\$18	\$18
		F2000 Basket, Wastepaper, Round, Metal, 18 H x 16 Dia.	1	EA	\$40	\$40
STAFF TLT/SHWR, F	1	A5075 Dispenser, Soap, Disposable	1	EA	\$18	\$18
		F2000 Basket, Wastepaper, Round, Metal, 18 H x 16 Dia.	1	EA	\$40	\$40
STAFF TLT/SHWR, M	1	A5075 Dispenser, Soap, Disposable	1	EA	\$18	\$18
		F2000 Basket, Wastepaper, Round, Metal, 18 H x 16 Dia.	1	EA	\$40	\$40
STAFF LOCKER ROOM, F	1	A1035 Locker, Single Tier, 72x12x18	1	EA	\$227	\$227
		A5025 Bench, Locker Room, Portable	1	EA	\$450	\$450
		F2000 Basket, Wastepaper, Round, Metal, 18 H x 16 Dia.	1	EA	\$40	\$40
		F3200 Clock, Battery, 12" Diameter	1	EA	\$51	\$51
STAFF LOCKER ROOM, M	1	A1035 Locker, Single Tier, 72x12x18	1	EA	\$227	\$227
		A5025 Bench, Locker Room, Portable	1	EA	\$450	\$450
		F2000 Basket, Wastepaper, Round, Metal, 18 H x 16 Dia.	1	EA	\$40	\$40
		F3200 Clock, Battery, 12" Diameter	1	EA	\$51	\$51
WAITING ROOM	1	F0305 Chair, Waiting Room, Single	1	EA	\$426	\$426
		F0470 Cabinet, Television / Video Recorder	1	EA	\$869	\$869
		F2300 Rack, Magazine, Wall Mounted	1	EA	\$276	\$276
		F3200 Clock, Battery, 12" Diameter	1	EA	\$51	\$51

Appendix B

Five Year Business Plan

Volume and Revenues	Year 1	Year 2	Year 3	Year 4	Year 5	Five Year Ave
Outpatient Volume	0					0
Inpatient Volume (Bed Days)	1,092	1,114	1,136	1,159	1,159	1,132
SDS Volume	0	0	0	0	0	0
Outpatient Revenue (CMAC)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Inpatient Revenue	\$ 2,475,661	\$ 2,600,550	\$ 2,731,747	\$ 2,813,699	\$ 2,898,110	\$ 2,703,953
SDS Revenue	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Gross Revenues	\$ 2,475,661	\$ 2,600,550	\$ 2,731,747	\$ 2,813,699	\$ 2,898,110	\$ 2,703,953
Deduction and Allowances	\$ 247,566	\$ 260,055	\$ 273,175	\$ 281,370	\$ 289,811	\$ 270,395
Net Operating Revenues	\$ 2,228,095	\$ 2,340,495	\$ 2,458,572	\$ 2,532,329	\$ 2,608,299	\$ 2,433,558

Expenses

Staff Expenses						
Military Staff	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Civilian Staff	\$ 1,072,690	\$ 1,104,871	\$ 1,138,017	\$ 1,172,157	\$ 1,207,322	\$ 1,139,011
Contract Staff	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Instructor Percentage	0%	0%	0%	0%	0%	
Staff Expense for E&T	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Equipment Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Maintenance Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Space Costs (Rent)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Construction Costs	\$ 1,900,000			\$ -	\$ -	\$ 380,000
Depreciation Costs**						
Travel Costs	\$ 55,000	\$ 57,200	\$ 59,488	\$ 61,868	\$ 64,342	\$ 59,580
Office Supplies	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Publications	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Supply Costs	\$ 153,600	\$ 156,672	\$ 159,805	\$ 163,002	\$ 166,262	\$ 159,868
Annual Shipping Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Annual Recurring Tech Costs	\$ -	\$ -	\$ -	\$ -	\$ -	
Professional Training	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Utilities						
Computers	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Gas Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Phone Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Electric Costs	\$ 14,232	\$ 14,801	\$ 15,393	\$ 16,009	\$ 16,649	\$ 15,417
Steam Costs	\$ 17,364	\$ 18,059	\$ 18,781	\$ 19,532	\$ 20,313	\$ 18,810
Housekeeping Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Sewer Costs	\$ 1,392	\$ 1,448	\$ 1,506	\$ 1,566	\$ 1,628	\$ 1,508
Laundry Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
LAN Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CHCS Contractor Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Operating Expenses	\$ 3,214,278	\$ 1,353,050	\$ 1,392,990	\$ 1,434,133	\$ 1,476,517	\$ 1,774,194

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14. ABSTRACT The purpose of this Business Case Analysis is to collect and examine data in order to determine whether or not to install Labor, Delivery, Recovery, and Post-Partum (LDRP) suites in the hospital planned for construction in 2011. This paper briefly discusses the local hospital and its impact on surrounding health care facilities, to include Naval Hospital Beaufort. The National Defense Authorization Act for fiscal year 2002 will be examined along with its impact on TRICARE Obstetrical in-patient beneficiaries and their available choices. The author will examine the opportunities to recapture this very important group. The final analysis indicates the need to abandon the plans for LDRP suites and to remain with the status quo, the current External Resource-Sharing Agreement.						
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